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ABSTRACT

A restructuring of the vocational education curriculum at a rural high school in a consolidated school district was made, in order to ensure student-centered learning geared to student needs, specifically for occupational preparation. Changes made included introduction of semester-length courses. To facilitate the development of individualized schedules for attaining career objectives, a summer workshop included administrators, guidance counselors, a librarian, supervisors, and vocational teachers. Leaders in business and industry were used as resource staff, with semester-length courses and an occupational guidance program as innovative features for flexible modular planning. Parents were consulted about their children's vocational course placements, especially focusing on parents of potential drop-outs. The use of a locally-developed vocational preference card, vocational interest testing, and related evaluative records enabled the staff to select 34 students for admission to an area vocational school, in addition to aiding other students develop vocational interests and capabilities. It was concluded that cooperative work experience is significant, because over 80 percent of the vocational students were permanently employed upon graduation. Extensive program materials are appended. (AG)

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DEVELOPMENT OF MODULAR COURSES IN VOCATIONAL CURRICULUM TO FACILITATE INDIVIDUALIZED SCHEDULING TO MEET THE OCCUPATIONAL OBJECTIVES OF EACH STUDENT

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Bureau of Vocational Technical and Continuing Education

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TABLE OF CONTENTS

		Page
I	Abstract	1
II	Methods	2
III	Findings and Analysis	6
IV	Conclusions and Recommendations	9

APPENDIX TABLE

Appendix A - Intentions upon graduation	11
Appendix B - Course Selection Sheet	12
Appendix C - Vocational Counselor Job Description	13
Appendix D - Vocational Course Description	14
D-1 Business Education	15
D-2 Distributive Education	19
D-3 Home Economics	21
D-4 Industrial Art	23
D-5 Visual Communication	25
D-6 Vocational Agriculture	27
D-7 Related Vocational	30
Appendix E - VEMIS Information	32
Appendix F - Vocational Preference	34
Appendix G - Vocational Course Enrollment	35
Appendix H - Vocational Mix Patterns	36

ABSTRACT

Almost from the beginning of time, educators and institutions of higher learning have placed emphasis on the student as being the center of the educational process. With the consolidation of our district in 1965 we have been a traditional rural high school; that is, teaching Academic (College Preparation), Business, Home Economics, and Agriculture. Any student which did not fit into one of these categories was classified as a student taking the general course. The Board of Education along with the leadership of the administration realized that a greater percentage of our graduates were entering the world of work immediately upon graduation than were enrolled in institutions of higher education. A program to rectify this condition became necessary. (Appendix A)

In the school year 1971-72, semester courses were offered for the first time from grades 9 - 12. (Appendix B)

Some teachers retained course offerings on a yearly basis since they felt it was too much material to cover in a single semester.

A vocational guidance counselor was employed to assist our regular counselor as he had entirely too many students to counsel. The vocational guidance counselor's primary concern was to coordinate business and industry with our vocational students in their specific areas of interest.

This project is vocational in nature; thus, we will be reporting only vocational subjects and related fields.

METHODS

To facilitate in the development of the semester curriculum, a summer workshop was held. The staff included administrators, guidance counselors, librarian, heads of departments and all vocational teachers. Representatives of Business, Distributive Education, Home Economics, and Agriculture were brought in as resource persons to give our staff some information to be considered for our curriculum. A short summation of the courses developed are included in Appendix D.

The Vocational Guidance Program provided services to students, parents, teachers, administrators, and citizens of the community concerned with labor market information. The following activities demonstrate services rendered to each of the groups listed above.

Students-Guidance and counseling time was provided for any student requesting such services. Considerable time was utilized in adjusting or developing students schedules during the first and second semesters to correlate with the career objectives as indicated by the students. If a specific career objective could not be identified, occupational clusters were introduced and exploratory courses suggested. Job opportunities and labor market information materials were kept on record and were available to students requesting such information.

Counselor efforts were blended with those of the existing vocational programs and placement services were provided to students expressing the desire to seek employment.

The counselor was responsible for coordinating visitation programs and eventual placement of ninth, tenth, and eleventh grade students desiring admission to the Columbia Montour Vocational-Technical School. Screening, evaluation of cummulative records and results of interviews were incorporated in the final selection of thirty-four students accepted for admission.

The Kuder Interest Inventory was administered to all ninth grade students and an interpretation of the scores was provided to each student. If it was deemed necessary, or requested, cummulative record information was interpreted to any high school student seeking assistance in the selection of a career objective.

Parents -- Services were provided to those parents who requested such information in the vocational education area. When needed, parents were consulted in relation to their son or daughter's placement in a career education area.

Parents of potential drop-outs were visited and a mutual effort was extended to provide educational programs tailored to meet the needs of these students.

Administrators -- The counselor suggested programs that were considered necessary in implementing the Career Education concept with administrators at all levels who have been most cooperative. Acceptance of the eighth grade occupational assembly programs and the Career Education Workshop involving Elementary, Middle and High School Faculty from each academic discipline has demonstrated acceptance of the program and cooperation on the part of each administrator at his respective level.

Community -- Workers associated in the labor market field at the local, state, and national level have been directly contacted. These people were invited to visit Central Columbia School district. When these people visited our school district they were made aware of the career education efforts developed within our school district. Services have been secured from the Pennsylvania State Employment Office, Neighborhood Youth Corps, and the Job Corps in which opportunities were presented to students involved.

Services provided by the Vocational Guidance Office have been designed to assist each student involved in the career decision making process.

An appropriate course of study developed around the student's career objective, demonstrated the utilization of the total educational program in preparing each student for the world of work.

Matrix tables have been developed to demonstrate the vocational education courses and the vocational departments in which each student was enrolled.

In designing the matrix, vocational courses were listed within departments and were plotted against individual students selections.

Examples are F-1, F-2 in Blue indicates ninth grade
S-1, S-2 in Red indicates tenth grade
J-1, J-2 in Black indicates eleventh grade
S-1, S-2 in Green indicates twelfth grade

The matrix shows the year a course was selected, the semester, grade level, and number of students.

VEMIS information was tabulated (Appendix E) and compared to total enrollment minus identified college bound students, a discrepancy was identified in the form of students who were neither classified as college bound nor vocational.

A vocational preference card (Appendix F) was developed on the local level. Information on the card requests vocational preferences (career objectives), work experiences, and occupational cluster interests.

Information derived from this survey instrument has enabled staff personnel to work with students, in the area of his capabilities and occupational interests.

It is unrealistic to assume that each school can or should duplicate many conditions associated with business and industry. Work study programs can and do bridge this gap. An intrical part of the total career educational curriculum in Central Columbia school district is the Work Study Program. This culminating activity provides "hands on experience" that is vital and related to each students career objective.

Growth in vocational enrollment was determined by a comparison of the Summary of Attendance Certificates submitted to the Department of Education.

FINDINGS AND ANALYSIS

The information results on the large matrix are condensed in Appendix G and H. Table G illustrates individual Vocational Course Enrollment Patterns by grade and sex. A summary of Appendix G is below.

Grade	Young Men	Young Women
9	2.15	1.60
10	3.20	3.00
11	3.80	3.30
12	3.60	3.20

The average number of vocational courses taken in an eight period day by an individual

Young men take more vocational subjects than young women.

As students get older they enroll in more vocational courses up through the eleventh grade. The decline in twelfth grade enrollment in vocational courses is best explained by the student being involved in cooperative work experience who has released time of four consecutive periods each day. It is assumed he would be taking vocational courses at this time.

For our definition of a vocational department curriculum refer to Appendix D where curriculum departments are classified as follows: Business, Distributive Education, Home Economics, Industrial Arts, Visual Communications, Vocational Agriculture, and Vocational Related. A summary of Appendix H is as follows:

86.38% of the Student body chose 1 or more Vocational subjects.
57.73% of the Student body chose courses in 2 or more Voc. depts.
29.81% of the Student body chose courses in 3 or more Voc. depts.
8.76% of the Student body chose courses in 4 or more Voc. depts.
2.04% of the Student body chose courses in 5 or more Voc. depts.

Appendix H entitled "Individual Vocational Mix Patterns by Grade and Sex" illustrates three points. First, the number of students who did not enroll in vocational course; second, the student who stayed within his own curriculum department; and third, the student who "mixed" between vocational curriculum departments to get the necessary technical knowledge to fulfill his occupational career objective.

The VEMIS information identifies careers on the ninth grade level in Home Economics and Vocational Agriculture only.

If a student is to make an intelligent selection of curriculum, he must declare his career intentions before eleventh grade. Business and distributive education students have completed half of required courses in their curriculum before declaring a VEMIS career objective.

There is a direct correlation between the VEMIS report and the Summary of Attendance Certificates.

	1970-71 PICA 61A # of Students	1971-72 DEBE 483 # of Students	1971-72 VEMIS # of Students
Vocational Agriculture	39.63	84.0	85
Home Economics	37.85	62.1	63
Business	47.00	50.0	50
Distributive Education	47.00	52.0	52

This table shows a growth in all curriculum departments with a tremendous increase in Vocational Agriculture and Home Economics. This growth is attributed to the fact that the student is no longer "locked in", but may select that portion of the curriculum which best fits his vocational education needs.

A summary of the 43 students placed in cooperative work experience is as follows:

		Percentage
The number of students employed (any job)	35	81.39
The number of students permanently employed by their training station	28	65.11
The number of students placed in career objective	29	67.44
The number of students not placed	8	18.60

New training stations are developed as growth and replacement needs dictate.

CONCLUSIONS AND RECOMMENDATIONS

Enrollment patterns have gone up in all vocational areas.

Flexibility has helped to motivate students. There is a direct positive relationship between what the student is doing in school and what he or she will be doing in the world of work.

According to Mier[1] low ability students in agriculture attended 2.1 more days of class during the first 90 days with semester scheduling than they did in the previous year.

Cooperative work experience is of significance because 81.39% of this year's vocational students were permanently employed upon graduation.

Future Farmers of America and Future Homemakers of America have had to change some of their procedures for having meetings since semester scheduling does not lend itself to contest preparation. DECA had little or no change.

FFA next year will meet as a scheduled class in preparation for all contests and planning of a farming program. This course will be offered for first year FFA members only.

Scheduling by semester can best be attained with the use of a computer, otherwise, it would be entirely too time consuming.

Students need guidance in scheduling a balanced load of vocational and academic courses.

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1 Mier, Donald K., "An Analysis of an Experimental Scheduling System Upon the Vocational Agriculture Department of the Central Columbia High School," Department of Agriculture Education Graduate School, Pennsylvania State University, June 1972.

APPENDIX SECTION

APPENDIX A

PERCENTAGE OF STUDENTS ENTERING COLLEGE VS. WORLD OF WORK

	1972	1971	1970	1969	1968
College	38.4	41	37	37.9	30.8
Business College	2.1	2	3	4.8	5.0
Trade School	5.6	9	7	2.8	5.0
Military Service	2.1	3.8	3	7.6	5.0
Nurse Training	2.8	1.9	4	4.1	5.0
Work	49.0	41.7	46	42.8	49.2
Number of Graduates	143	156	155	145	120

All figures except number of graduates are expressed as percentages of the graduating class.

APPENDIX B

CENTRAL COLUMBIA HIGH SCHOOL -- Course Registration 1971-72

Name _____ Grade _____ Sex F - M

101 American Novel
102 Bus. English
103 Composition I
104 Composition II
105 Contemp. Lit.
106 Drama
107 Eng. Lang. & Hist.
108 Eng. Novel
109 Fund. of Lit.
110 Journalism
111 Journalism Lab.
112 Lit. Back. from Bible
113 M yth. Leg.&Folklore
114 9th Gr.Eng. & Comp.
115 Poetry
116 Prep. Col-Ent. Tests-E
117 Short Story
118 Speech I
119 Speech II
120 Theatre Arts I
121 Theatre Arts II
122 Voc. English
123 World Lit.
151 American Cultures
152 World Cultures
153 Economics
154 Sociology
155 Political Science
156 Anthropology
157 Contemp.Am. Hist.
158 Contemp. World Hist.
159 Gr. Ideas of Man
160 Crit. World Issues
161 World Geography
201 Algebra I
202 Algebra II
203 Algebra III
204 Calculus
205 Concepts in Math
206 Consumer Math
207 Descriptive Geom.
208 Elem. Functions
209 Fund. of Math
210 Geometry
211 Practical Algebra
212 Prep.-Coll. Ent. Tests - M
213 Trigonometry
251 Phys. Science I
252 Biology I
254 Biology II
256 Chemistry
257 Chemistry Lab.
258 Qual. Analysis
259 Astronomy
260 Physics
262 Phys. Science II
301 Consumer Education
302 Bus. Careers & Fund.
303 Business Law
304 Elem. Accounting
305 Inter. Accounting
306 Adv. Accounting
307 Business Math
308 Soc. Skills&Bus. Comm.
309 Marketing I
310 Marketing II
311 Shorthand Principles
312 Begin. Dictation
313 Intro. to Transcrip.
314 Speed. Dicta. & Trans.
315 Adv. Sp.Dict. & Trans.
316 Simu. & Proj. in Shthd.
317 Beginning Typing
318 Intermediate Typing
319 Advanced Typing
320 Empl. Prep. Typing
321 Bus. Mach. &Off. Prac.
322 Applied Cler. Train.
351 Art Appreciation
352 Advanced Art
353 Ceramics
354 Crafts
355 Drawing
356 Painting
401 Band
402 Chorus
404 Music Appreciation I
405 Music Appreciation II
406 Music Theory I
407 Music Theory II
451 French I
452 French II
453 French III
454 Dir. French Readings
455 Compar. Cultures
456 German I
457 German II
458 German III
459 Adv. German
460 Read.Sel.in German
461 Spanish I
462 Spanish II
463 Conversational Span.
464 Span. Read.& Selec.
501 Basic Cloth.Construction
502 Basic Tailoring
503 You and Your Machine
504 Textiles & Clothing
505 Basic Food Prep.
506 Spec. Food Prep.
507 Conv. Food Cooki
508 Nutrition
509 Fam.Heal.&Safe L
510 Hous.for Family
511 Pers.Fam.&Comm.R
512 Child Care
513 School Service
551 Art Metal
552 Metal Sculpture
553 Sheet Metal Fabr
554 Basic Woodworkin
556 Advanced Woodwor
557 Leathercraft
558 Plastic Tech.
601 Intro.to Visual
602 Arch.&Struc.Draf
603 Productive Illus
604 Graphic Commun.I
605 Graphic Commun.I
606 Graphic Commun.I
651 Basic Shop
652 Sm.Gas Engines
653 Welding
654 Fram Metal Work
655 Int. Comb. Engin
656 Structures & Uti
657 Electricity
658 Farm Mach.Ser..M
659 Anim.Nutri.&Butch
660 Soil & Wat. Conse
661 Agri.Bus.Leadersh
662 Animals Science
663 Cit. Frt.&Veg.Tec
664 Lawn-Turf Nur-Grn
665 Project
666 Service Sta.Train
667 Carpentry
701 Health
706 Adapt.Phys.Ed.
710 Driver Education
715 Safety Education
720 Coop. Work Exp. a
721 Coop. Work Exp. p
730 Adv. Coll.Placeme
731 B.Ph. Ed. 9 & 10
732 B.Ph. Ed. 11
733 B.Ph. Ed. 12
734 G.Ph. Ed. 9 & 10
735 G. Ph.Ed. 11
736 G. Ph.Ed. 12
722 Coop Work Exp.am/

APPENDIX C

VOCATIONAL GUIDANCE COUNSELOR

Duties and Responsibilities

With community:
1. To meet with personnel directors of industries to determine the number of jobs available (present and future) and the competency necessary to secure them.
2. To run a survey of the jobs available in small business and stores and determine skills required to enter the trades or business.

With pupils:
1. To counsel with vocational and pre-vocational students as to available vocations both local and at large.
2. To coordinate programs of courses to meet the occupational objective of the individual student.
3. To provide a placement service to actually get students jobs to match their occupational objective.
4. To counsel with students who plan to attend the Columbia-Montour Vocational Technical School.
5. To interpret test results to vocational students.

With Administrators:
1. To provide the knowledge as to the competency and salable skills necessary for success of the students in the vocational fields. To suggest changes in curriculum necessary to help fill the needs of the students and the community.
2. To constantly evaluate previous students success in the vocational fields of their choice.

With Middle School and High School Counselors:
1. Consult in the selection and use of test and interpretation of test results.
2. To act as a resource person to Middle School.
3. To work with other counselors in a referral system of hard-to-reach students.

With Parents:
1. Provide individual counseling to the parent in relation to the pupil's school experience and factors related to his academic progress.
2. Provide information about available guidance and counseling services and community resources.
3. Provide information and orientation to parents concerning future educational alternatives which are available for pupils.
4. Interpret test results to parents.

APPENDIX D

VOCATIONAL COURSE DESCRIPTION

Semester	--	Period of 18 weeks (90 school days)
Kuder	--	Interest Inventory
VEMIS	--	Vocational Education Management Information System
FFA	--	Future Farmers of America
FHA	--	Future Homemakers of America
DECA	--	District Education Club of America
PICA	--	Attendance Report
DEBE	--	Department of Education Report
Vocational Mix	--	Intermingling of Vocation Students

APPENDIX D-1

BUSINESS EDUCATION DEPARTMENT

CONSUMER EDUCATION (1 Semester)

This course is designed to make you a better buyer. Products and services will be computed to find "good" buys. Techniques for dealing with salesmen, stores, and advertising media also will be included. Examples and situations used are simulation of real-life experiences. Prerequisites: none.

EXPLORING BUSINESS CAREERS AND FUNDAMENTALS (1 Semester)

You will be informed of the job opportunities available in the various business and marketing fields. It will include discussions of employment practices, general qualifications, educational requirements, advancement possibilities, fringe benefits, and expected income potential. This course also will include basic information which will relate to financial problems facing you at the present time as well as in future years. (Banking, using credit, investments, and insurance.) Prerequisities: none.

BUSINESS LAW (1 Semester)

The purpose of this course is to acquaint you with civil law. It will include the interpretation of many of our existing laws, with an emphasis on the Uniform Commercial Code. You will discuss the commercial code as it relates to Personal Property and Contracts, Commercial Papers, Sales and Contract Rights. Prerequisities: none.

ELEMENTARY ACCOUNTING (1 Semester)

Elementary Accounting is designed to present you with basic vocational skills that are common to business jobs in which fundamental record-keeping is involved. Business forms and business procedures will be presented and discussed in class which will prepare you for entry-level jobs. Prerequisites: none.

INTERMEDIATE ACCOUNTING (1 Semester)

Intermediate Accounting will include a foundation in bookkeeping principles and terminology. The course will contain enough background so a set of books for a small business could be maintained. Basic principles will be presented and will show how they can be adapted to personal and social use. Prerequisite: Elementary Accounting.

BUSINESS EDUCATION DEPARTMENT

ADVANCED ACCOUNTING (1 Semester)

Advanced Accounting is designed to show the relationship of all bookkeeping forms to the bookkeeping cycle. You will learn how to prepare, read, and interpret business reports and financial statements. The course may be used as an exploratory course to determine interest and aptitude for accounting as a profession. Prerequisites. Elementary Accounting and Intermediate Accounting.

BUSINESS MATH (1 Semester)

Business Math is constructed to improve your ability to solve problems that are familiar in business today. Emphasis will be placed on accuracy and speed. Arithmetic skills needed to work in business today are presented along with charts and illustrations familiar in the field of business. Prerequisites: none.

SHORTHAND PRINCIPLES (1 Semester)

Shorthand Principles has a two-fold purpose: namely, to provide a foundation for future shorthand courses for the stenographic-secretarial student and to provide a notetaking skill for the college-bound student. The theory or principle of Gregg Shorthand--including the shorthand alphabet, brief forms, abbreviation devices, and phrasing will be introduced. Punctuation rules and an intensive course in spelling will also be provided this semester as well as in all future courses in this sequence. Prerequisites: none.

BEGINNING DICTATION (1 Semester)

The shorthand theory presented in the first semester will be reinforced through the medium of word lists and connected matter. You will develop the ability to take new matter dictation at 60 and 80 words a minute. The Awards Program from the Gregg Publishing Company will be introduced this semester and will be continued in the courses that follow. Under this program, it will be possible for you to progress at your own rate. Prerequisite: Shorthand Principles.

INTRODUCTION TO TRANSCRIPTION (1 Semester)

Transcription techniques will be presented by transcribing at the typewriter from the textbook and from dictation. You will learn to place letters attractively by judgment. The mechanics of English will be developed through the transcription practice. Your ability to construct outlines under the stress of dictation at 80 and 100 words a minute will be another desired outcome of this course. Prerequisites: Shorthand Principles and Beginning Dictation.

BUSINESS EDUCATION DEPARTMENT

SPEED DICTATION AND TRANSCRIPTION

The previously learned shorthand and typewriting skills will be strengthened during this course. The shorthand skills to improve speed and accuracy of transcription will be emphasized. You will strive to attain a high degree of shorthand skill--100 to 120 words a minute. By including training in office-style procedures and secretarial procedures, you will be better equipped to participate in the work-experience program starting the following semester. Prerequisites: Shorthand Principles; Beginning Dictation; and Introduction to Transcription.

ADVANCED SPEED DICTATION AND TRANSCRIPTION (1 Semester)

Since the business world is demanding more highly skilled secretaries, this course is designed to meet this need. Your shorthand skill will be developed to expert level, transcription speed and accuracy will be improved, vocabulary used in executive dictation will become an important factor in their learning experience; preparations for personal interviews, and a variety of office experiences will be integrated by the use of practice sets. Legal, medical, and technical terminology will be used in dictation practice. You will acquire the ability to produce mailable transcripts accurately and rapidly. Prerequisites: Shorthand Principles; Beginning Dictation; Introduction to Transcription and Speed Dictation and Transcription.

STIMULATIONS AND PROJECTS IN SHORTHAND (1 Semester)

Speed and accuracy in taking dictation and transcribing will be continued. An intensive study in preparation for the Civil Service examinations for Clerk-Stenographers will be given prior to the examination. If you should encounter difficulty in any part of the examination, you will be given additional training before being re-examined by the Civil Service Commission. Most of you by this time will be participating in the work-experience program and will be putting into practice the skills learned in this and previous courses. There will be, from time to time, problems arising in which you will need additional help or training. These problems encountered by you in your respective jobs will be fully discussed. The practical aspect of the course will then become apparent and help will be given in the areas where needed. Prerequisites: Shorthand Principles; Beginning Dictation; Introduction to Transcription; Speed Dictation and Transcription; and Advanced Speed Dictation and Transcription.

BUSINESS EDUCATION DEPARTMENT

BEGINNING TYPING (1 Semester)

This is the first course in typewriting. It will emphasize learn to type by touch--without looking at the keyboard--and acquiring a minimum skill for personal use. This course will include instruction in the typing of a personal letter, business letter, envelope, postal card, theme, and a simple table. Prerequisites: none.

INTERMEDIATE TYPEWRITING (1 Semester)

This is the second course in typewriting. The objective will be an increase in typing speed and accuracy. It will emphasize the typing of themes for the college-bound students and provide some instruction in business forms as a foundation for vocational typewriting. Prerequisite: Beginning Typewriting.

ADVANCED TYPEWRITING (1 Semester)

This is the third course in typewriting, and it is designed to build even greater speed and accuracy and improved know-how and competence in performing office typing jobs. Prerequisites: Beginning Typewriting and Intermediate Typewriting.

EMPLOYMENT PREPARATION TYPEWRITING (1 Semester)

This is the fourth and final course in typewriting. Emphasis will be placed on attaining production proficiency on correspondence, reports and forms. Practice will also be provided in a variety of office-like situations as preparation for employment in business. Prerequisites: Beginning Typewriting; Intermediate Typewriting; and Advanced Typewriting.

BUSINESS MACHINES AND OFFICE PROCEDURES (2 Semesters)

This one-year course will include instruction in the use of the basic business machines (calculating, duplicating, and transcribing) and in office procedures such as filing, using the telephone, handling the mail, greeting callers and understanding data processing concepts. The completion of practice sets in filing and typewriting will be required. Prerequisites: Beginning Typewriting and Intermediate Typewriting.

APPLIED CLERICAL TRAINING (2 Semesters)

This is a one-year course. You will be allowed to concentrate in depth on a particular area of instruction, e.g., filing, clerical typewriting, duplicating or calculating machine operation. Opportunities will be provided for integrating and applying previous business training on office-like situations. Prerequisites: Beginning Typewriting; Intermediate Typewriting; Advanced Typewriting; and Employment Preparation Typewriting.

APPENDIX D-2

DISTRIBUTIVE EDUCATION DEPARTMENT

SOCIAL SKILLS AND BUSINESS COMMUNICATIONS (1 Semester)

This course emphasizes those personal attributes which will make you employable and help you succeed on the job and enable you to advance to your ultimate occupational objective. Such topics as: Getting along with others; adjusting to different people and conditions; parliamentary procedures; techniques of applying for a job and etiquette will be included in the course. Prerequisites: none.

MARKETING I (PRINCIPLES OF SELLING) First Semester

This course is concerned with developing a degree of competence within you to communicate facts, influence buying decisions, and provide required services to the ultimate consumer. "The sale" is the culminating activity toward which all other marketing activities are directed. You, to be an effective part of distribution, must employ desirable techniques and incorporate a high of service to those who buy. You must achieve these goals to complete this one semester course. Prerequisite: none.

MARKETING I (ADVERTISING AND PRODUCT TECHNOLOGY) Second Semester

This course included the study of techniques used to stimulate a demand for goods and services. All aspects of promotion, including display, will be presented so you may have an awareness of how to reach potential customers. Special skills needed to handle most products will also be studied in depth. Included in this course will be a study of the product or service selected by you. This will be based upon your career objective. Other activities will relate to the manufacturing processes of the product, characteristics, advantages and disadvantages, care, cautions in its use, and related products or services. Prerequisites: Principles of Selling.

MARKETING II (DISTRIBUTIVE BUYING AND OPERATIONS) First Semester

This course involves the study of balancing the supply (the items bought) with demand (items needed in a given market area). It also includes the obtaining and controlling of manufactured goods for resale. A study of operations centers on product handling; protection; customer services; purchasing of supplies; and utilization of equipment, supplies and services. Prerequisites: Principles of Selling; Advertising and Product Technology.

MARKETING II (MARKET RESEARCH AND MANAGEMENT) Second Semester

The study job market research begins with developing an awareness of where improvements can be made, followed by learning to identify and analyze problems. Instruction in management includes policies, organization, and

personnel in the field of distribution. The management function will be concerned with the factors of who, what, when, why, and how. Prerequisites: Principles of Selling; Advertising and Product Technology; and Distributive Buying and Operations.

APPENDIX D-3

HOME ECONOMICS DEPARTMENT

BASIC CLOTHING CONSTRUCTION (1 Semester)

A review of previously learned techniques on sewing machine operation, pattern interpretation and application to sewing various seam finishes, zipper application, etc. Briefly all techniques for individual sewing will be taught and applied when possible due to pattern selection.

BASIC TAILORING (1 Semester)

This must be preceded by Basic Clothing Construction. All sewing techniques used both in hand and commercial tailoring will be included in relation to pattern. Prerequisite: Basic Clothing Construction.

YOU AND YOUR MACHINE (1 Semester) *

The use of all machine attachments and adjustments to aid in clothing construction and household sewing. Prerequisites: Basic Clothing Construction.

TEXTILES AND CLOTHING (1 Semester) *

Man-made and natural fibers from origin and technical definitions, characteristics, care and use will be studied as will fibers, their problems and application to clothing construction. The Textile Fiber Identification Act, Labeling, and Fabric identification in relation to daily living is also included.

BASIC FOOD PREPARATION (1 Semester)

Application of cooking principles to the four food groups and "three squares a day".

SPECIAL FOOD PREPARATION (1 Semester)

Special food preparation is necessary when we entertain and celebrate our various holidays or special family days such as weddings, parties, etc.

CONVENIENCE FOOD COOKING (1 Semester)

This course combines the applicatinn of convenience food to daily living and good nutrition. This course is for people who combine job, school and homemaking.

HOME ECONOMICS DEPARTMENT

NUTRITION (1 Semester) *

A depth course in the study of nutrition. Useful for daily living and future professions. A basic understanding of the effect of nutritions on health and disease is an important part of the course.

HOUSING FOR THE FAMILY (1 Semester) *

This is a course in basic types of homes and their furnishings. It includes styles of furniture and the other accessories that combine to make a tasteful and well-furnished house that leads to comfortable living in a home.

PERSONAL FAMILY AND COMMUNITY RELATIONSHIP (1 Semester) *

The acceptable you--good manners or how to appear poised and well-mannered in daily situations at home, school and community are stressed in this course.

CHILD CARE (1 Semester)

Our responsibility to our children for physical care, moral and social behavior, children's rights and privileges and the pleasures and responsibilities of guiding a personality to desirable development.

SCHOOL SERVICE (1 Semester)

The Home Economics Department has in the past performed services to help Central Columbia High School entertain guests, make necessary repairs in the textile field, care for school uniforms and represent the school on many levels of competition. This course would provide many interesting challenges and give necessary service to our school and develop community responsibility.

* Courses were not offered during school year 1971-1972 because of insufficient student requests or lack of staff.

APPENDIX D-4

INDUSTRIAL ARTS DEPARTMENT

ART METAL AND SCULPTURE (1 Semester)

This phase of metal working will be concerned with the design and execution of products in: Jewelry and Lapidary; Raising; Spinning; Centrifugal Casting; Enameling; Etching and Engraving. Metals used in these processes are Sterling Silver, Copper, and Brass. Students will have an opportunity to pursue any area of individual interest within the range of these processes and materials.

This offering provides opportunities for students to create art objects utilizing all areas of the metal shop. All methods of forming, fastening and finishing are combined to produce projects of unusual beauty. Special emphasis will be placed on welding, casting, and forming in an effort to allow for student self-expression.

BASIC WOODWORKING (1 Semester)

This course is an introduction to the operation, maintenance and safety procedures involved with all hand and machine woodworking tools. Students will have free choice in project selection. Prerequisite of Advanced Woodworking.

ADVANCED WOODWORKING (1 Semester)

An introduction to the more sophisticated techniques in woodworking. Attention will be given to design, execution and finishing of projects in woodworking. Upholstering and turning on the lathe will be introduced.

METHODS OF INDUSTRY (1 Semester) *

This course will offer experience in the various areas of metal production. Emphasis will be placed on: Reading visual communications; arc and gas welding, forge work, foundry; machine shop; and the use of precision instruments.

SHEET METAL FABRICATION (1 Semester) *

All phases of sheet metal fabrication; layout, forming, seams, fastening and finishing, will be demonstrated in an effort to provide the student with experiences and an understanding of all machinery and processes in the sheet metal area.

INDUSTRIAL ARTS DEPARTMENT

LEATHER WORK (1 Semester)

This course will be concerned with the various methods of fabricating and decoration of projects of leather. Emphasis will be placed on stitching, lacing, tooling, also carving and dyeing of leather projects. Design and execution of leather will be included in this offering.

PLASTIC TECHNOLOGY (1 Semester) *

Will be concerned with the methods of forming, fastening, decorating, fabricating and finishing projects made of plexiglass and acetate plastic. Attention will be given to the manufacturing and technological applications of the plastic industry.

* Courses were not offered during school year 1971-1972 because of insufficient student requests or lack of staff.

APPENDIX D-5

VISUAL COMMUNICATIONS DEPARTMENT

INTRODUCTION TO VISUAL COMMUNICATIONS (2 Semesters)

Consists of an overview of Mechanical Drawing; its history, its language and its approved practices. It will cover care and adjustment of equipment, theory of shape description, sketching, working drawings, pictorial drawing, inking and reproduction, sectional and other conventional views.

ARCHITECTURAL AND STRUCTURAL DRAFTING (1 Semester)

Is structural in three parts: 1. A description of building materials and construction principles; 2. Presents the information necessary for building, planning, and design; 3. The drawing of building plans. Overall, this course will provide a precise introduction to Architectural Drafting.

PRODUCTION ILLUSTRATION (1 Semester)

Will be a freehand sketching course giving the student the opportunity to gain skills in the various types of pictorial representation used in technical illustration.

GRAPHIC COMMUNICATIONS (1 Semester)

A more advanced program in interpretation and execution of the graphic language. The following topics will be investigated: Auxiliaring views; revolutions; intersections and developments. This course should be strongly considered by students planning to pursue a career in engineering or mathematics. Prerequisite: Introduction to Visual Communications.

GRAPHIC COMMUNICATIONS II (1 Semester)

Will be concerned with the draftsman's approach to: Size description; standard approved practices; screws; bolts; fasteners; cams and gears; threads; and welding drawings. Prerequisite: Introduction to Visual Communications.

GRAPHIC COMMUNICATIONS III (1 Semester)

An introductinn to Electrical and Electronic drafting practices as well as an overview of Aerospace drafting. This course will attempt to give attention to the most advanced practices in drafting. Prerequisite: Introduction to Visual Communications.

VISUAL COMMUNICATIONS DEPARTMENT

ADVERTISING ART (1 Semester)

This course will instruct students as to the "why" of advertising and how to achieve a successful layout for magazines, newspapers, posters, and various brochures. Planning of successful layouts requires a business point of view, imagination and knowledge of consumer reactions. It demands a group of basic principles of design and color and technical details such as typography, lettering, bleed space and process of reproduction.

APPENDIX D-6

VOCATIONAL AGRICULTURE DEPARTMENT

BASIC SHOP (2 Semesters)

Safe use of machines and tools along with identification and use of hand and power tools will be stressed. Sketching and drawing, wood work, electricity, sheet metal, soldering, painting, varnishing, glazing, concrete work, and the introduction to welding.

ELECTRICITY (1 Semester)

A combination of subject matter and practical experiences designed to provide opportunities for pupils to gain knowledge and understanding concerning making effective use of electricity and electrical equipment. The course will include installing meters, wiring buildings, switches, fixtures, electric motors, and the use of automatic controlls.

WELDING (1 Semester) *

The purpose of this course will be to teach the skill of actual welding to include mild steel, stainless steel, cast, and aluminum. Three basic machines will be used; oxyacetylene, electric arc, and Tig machine. The operations will include cutting, brazing, and various position welding.

SMALL GASOLINE ENGINE (1 Semester)

This course will deal with the theory of just how and why an engine works. Practical work will include tune-up procedures, honing the cylinders, grinding valves and reading the micrometer to determine worn parts. Machines these small engines are installed on, will be studied. (chain saws, mowers, garden tractors, boat motors, etc.)

INTERNAL COMBUSTION ENGINES (1 Semester)

This course will deal mainly with the tune-up of tractor and automotive type engines (timing, points, plugs, etc.) along with how to change tires, students will get the opportunity to disassemble an engine, then reassemble and actually run the engine. Trouble shooting is an intrical part of the program. All students must have taken the Small Gasoline Engine course first.

VOCATIONAL AGRICULTURE DEPARTMENT

CARPENTRY (1 Semester) *

Emphasis will be placed on the efficient use of the steel square, laying out of rafters, cutting stair stringers, measuring and marking wood, selecting and storing lumber, small woodworking, individual projects may be made in this course.

STRUCTURES AND UTILITIES (1 Semester)

The designs of buildings along with the experience of how to go about putting in footers. The use of the transit in laying out building and building sights will be studied. A unit on concrete, brick and block laying will be included. Plumbing and heating ventilation and insulation experiments and exercises.

FARM MACHINERY SERVICE AND MAINTENANCE (1 Semester)

The study of adjustment and service maintenance on tractors, plows, tillage machinery, combines, balers, corn planters, grain drills, and corn harvesting machinery.

INDIVIDUAL PROJECT WORK (1 Semester) (11-12)

The building of a major project by the students. You must have your plans ready and prior approval before taking this course. Recommended for 11 and 12 only.

ANIMAL NUTRITION AND BUTCHERING (1 Semester)

The study of the relationship of proteins, fats, carbohydrates, water, minerals, and vitamins in the production of meat, milk, eggs, and wool. It is the "least cost" combinations of feed ingredients for achieving maximum performance. The identification of cuts of meat will be minimal. Actual butchering of some animals will occur. The pricing of various cuts, storage facilities, curing, and smoking meat will also be covered.

ANIMAL SCIENCE (1 Semester)

Organized subject matter and experiences designed for the study of and application to various major livestock enterprises (beef cattle, dairy cattle, poultry, horses, swine, sheep.) Among the considerations emphasized in instruction are selection and breeding, animal health, housing management and marketing. The class interest will determine which area is studied most.

VOCATIONAL AGRICULTURE DEPARTMENT

LANDSCAPE - TURF - NURSERY - GREENHOUSE (1 Semester) *

This course is concerned with the principles and practices involved with locating, planting, and maintaining turf, plants, trees or devices for the beautification of home grounds. Included will be the operation, maintenance and management of greenhouses and types of artificial environment.

CROPS, FRUITS AND VEGETABLE TECHNOLOGY (1 Semester) *

The study of growing corn, cereal grains, forage crops, small fruits and vegetables and the production, management and marketing of these products.

AGRICULTURE BUSINESS LEADERSHIP (1 Semester) *

Recommended for on-job-training students. Emphasis in instruction is on such considerations as development of knowledge about and ability to work with agricultural manpower; employee selections; employer-employee relations; wages and working conditions; legal requirements; and conditions affecting the employee (education, health and language barriers.) Recommended for Grade 12.

*Courses not taught

APPENDIX D-7

VOCATIONAL RELATED SUBJECTS

JOURNALISM (1 Semester)

This course will offer you a study of journalism in general and newspapers in particular. Both a textbook and the school newspaper will be utilized as sources. You will learn how to write news, feature, and sports stories, headlining, copyreading, make-up and proof reading and printing process, all within the established guidelines of responsible journalism.

SPEECH I (1 Semester)

Since our world is getting larger and larger in terms of each individual's contacts with other people, the need for communication cannot be minimized. Speech I will help you to present logical, intelligent speech experiences. These will include narration, description, introduction, parlimentary procedure, commercials, readings, and dialogue.

SPEECH II (1 Semester)

This course is recommended if you are a college-bound student or if you have an interest in expressing your ideas more clearly orally. You will be involved in effective speaking in groups -- interviews, discussion, debate, as well as longer and more specific speeches than the ones required in Speech I.

VOCATIONAL ENGLISH (1 Semester)

This course is designed for those people who do not plan to continue formal schooling beyond high school, but find themselves with a need for additional work in both spoken and written English. Emphasis will be placed on the glaring errors which occur in both conversation and written letters and reports of all types.

BUSINESS ENGLISH (1 Semester)

This course is designed for students who are interested in improving their business techniques in both written and oral English. Special emphasis will be placed on the mechanics of punctuation, capitalization, hypenation, and numbers. In addition, considerable time will be spent on spelling, frequently confused expressions, oral expression, and effective business letters, including personal business letters, thank-you notes, and application letters.

VOCATIONAL RELATED SUBJECTS

CONSUMER MATHEMATICS (2 Semesters)

Consumer Mathematics is offered primarily to the student not having followed the business sequence. The purpose of this course is to make each student a more intelligent consumer by teaching him how to carefully analyze consumer problems. Topics to be covered include transportation, food, clothing, housing, income and budgets, taxation, consumer credit, banking, insurance, and investments.

COOPERATIVE WORK EXPERIENCE (2 Semesters)

This culminating activity enables the student to put into effect the educational experiences from theory to actual practice with cooperative community businesses and industry.

Flexible scheduling allows the student to select morning, mid-day or afternoon work sessions. Released time from school will be for consecutive periods. Considerable effort will be used to aline work stations commensurate with individuals career objectives.

APPENDIX E

CENTRAL COLUMBIA HIGH SCHOOL

VOCATIONAL EDUCATION MANAGEMENT INFORMATION SYSTEM CAREER OBJECTIVE SELECTIONS

Vocational Area	Number of Students per Grade 9	10	11	12	TOTAL
AGRICULTURE					
CODE					
400 AGRICULTURAL PRODUCTION	0	1	3	2	6
402 AGRICULTURAL MECHANICS	32	10	7	3	52
403 AGRICULTURAL PRODUCTS	1	1	1	4	7
404 HORTICULTURE	0	1	0	0	1
499 AGRICULTURAL OTHER THAN ABOVE	13	3	0	3	19
AGRICULTURE TOTALS	46	16	11	12	85
USEFUL HOME ECONOMICS					
CODE					
602 CLOTHING & TEXTILES	24	4	4	7	39
606 FOODS & NUTRITION	12	4	2	3	21
699 USEFUL HOME ECONOMICS OTHER	2	0	1	0	3
USEFUL HOME ECONOMICS TOTALS	38	8	7	10	63
DISTRIBUTIVE EDUCATION					
CODE					
000 NO DECLARED CAREER OBJECTIVE	0	0	21	0	21
811 ADVERTISING SERVICE	0	0	0	1	1
812 APPAREL & ACCESSORIES	0	0	0	1	1

VEMIS-CAREER OBJECTIVE SELECTIONS CONTINUED

Vocational Area	9	10	11	12	TOTAL
813 AUTOMOTIVE	0	0	0	5	5
816 FOOD DISTRIBUTION	0	0	0	3	3
817 FOOD SERVICES	0	0	0	4	4
818 GENERAL MERCHANDISE	0	0	0	1	1
819 HARDWARE BUILDING MAINTENANCE	0	0	0	1	1
825 PERSONAL SERVICES	0	0	0	2	2
826 PETROLEUM	0	0	0	1	1
830 RETAIL TRADE, OTHER	0	0	0	7	7
831 WHOLESALE TRADE, OTHER	0	0	0	2	2
832 DISTRIBUTIVE EDUCATION, OTHER	0	0	0	3	3
DISTRIBUTIVE EDUCATION TOTALS			21	31	52
BUSINESS EDUCATION					
CODE					
700 BOOKKEEPING/ACCOUNTING	0	0	4	6	10
702 GENERAL CLERICAL	0	0	4	7	11
706 STENOGRAPHIC/SECRETARIAL	0	0	15	14	29
BUSINESS EDUCATION TOTALS			23	27	50
TOTAL ENROLLMENT BY GRADE	84	24	62	80	250

APPENDIX F

Please complete the following information..... Use PENCIL only.....

VOCATIONAL PREFERENCE: Please list your vocational interest(s)

1st Choice ..... 2nd Choice ..... 3rd Choice .....

Work Experience: Please list your most recent work experience(s).

EMPLOYER	JOB TITLE	DUTIES

OCCUPATIONAL CLUSTER PROGRAM: CIRCLE THE OCCUPATIONAL CLUSTER(S) WHICH INTEREST(S) YOU.

1. Health
2. Environment
3. Manufacturing
4. Transportation
5. Construction
6. Business & Office
7. Public Service
8. Marine Science
9. Fine Arts & Humanities
10. Personal Service
11. Agri-Business & Natural Resources
12. Consumer & Homemaking Education
13. Marketing & Distribution
14. Communication & Media
15. Hospitality & Recreation

PRINT BELOW:

Last Name	First Name	Grade	Date	For School Use Only VEMIS CODE

APPENDIX G

CENTRAL COLUMBIA HIGH SCHOOL 1971-1972 ACADEMIC YEAR

INDIVIDUAL VOCATIONAL COURSE ENROLLMENT PATTERNS BY GRADE AND SEX

GRADE 9						GRADE 10						GRADE 11						GRADE 12					
YOUNG MEN TOTAL 105			YOUNG WOMEN TOTAL 103			YOUNG MEN TOTAL 81			YOUNG WOMEN TOTAL 87			YOUNG MEN TOTAL 86			YOUNG WOMEN TOTAL 77			YOUNG MEN TOTAL 62			YOUNG WOMEN TOTAL 83		
Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage	Vocational Subjects	Number of Students	Percentage
0	6	6	0	22	21	0	8	10	0	16	18	0	6	7	0	19	25	0	5	8	0	11	13
1	20	19	1	29	28	1	14	17	1	15	17	1	13	15	1	10	13	1	10	16	1	12	14
2	42	40	2	23	22	2	9	11	2	13	15	2	12	14	2	8	10	2	7	11	2	10	12
3	16	15	3	23	23	3	15	18	3	10	11	3	9	10	3	9	12	3	9	14	3	11	13
4	11	10	4	5	5	4	7	9	4	8	9	4	10	11	4	8	10	4	10	16	4	11	13
5			5	1	1	5	15	18	5	5	6	5	9	10	5	3	4	5	6	10	5	15	18
6			6			6	6	7	6	5	6	6	11	13	6	7	9	6	6	10	6	9	11
7			7			7	6	7	7	12	14	7	11	13	7	3	4	7	5	8	7	2	2
8			8			8	1	1	8	3	3	8	5	6	8	6	8	8	4	6	8	2	2
9			9			9			9			9			9	4	5	9			9		
10			10			10			10			10			10			10			10		
AVE. 2.15			AVE. 1.6			AVE. 3.2			AVE. 3.0			AVE. 3.8			AVE. 3.3			AVE. 3.6			AVE. 3.2		

APPENDIX H

CENTRAL COLUMBIA HIGH SCHOOL 1971-1972 ACADEMIC YEAR

INDIVIDUAL MIX PATTERNS BY GRADE & SEX

GRADE 9						GRADE 10						GRADE 11						GRADE 12						
YOUNG MEN TOTAL 105			YOUNG WOMEN TOTAL 103			YOUNG MEN TOTAL 81			YOUNG WOMEN TOTAL 87			YOUNG MEN TOTAL 86			YOUNG WOMEN TOTAL 77			YOUNG MEN TOTAL 62			YOUNG WOMEN TOTAL 83			
Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Vocational Departments	Number of Students	Percentage	Percent
0	6	6	0	22	21	0	8	10	0	16	18	0	6	7	0	19	25	0	5	8	0	11	13	13.59
1	38	36	1	45	45	1	18	22	1	24	28	1	22	26	1	14	18	1	19	31	1	16	19	28.65
2	55	52	2	30	29	2	25	31	2	15	17	2	17	20	2	21	27	2	12	20	2	16	19	27.92
3	5	5	3	6	6	3	17	21	3	24	28	3	25	29	3	19	25	3	15	24	3	33	40	21.05
4	1	1	4			4	9	11	4	8	9	4	9	10	4	3	4	4	10	16	4	6	7	6.72
5			5			5	4	5	5			5	7	8	5	1	1	5	1	1	5	1	1	2.04
6			6			6			6			6			6			6			6			